



University of Arkansas Division of Agriculture

**An Agricultural Law Research Project**

**Nutrient Management Plans  
Statutes & Regulations**

**Delaware**

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## Nutrient Management Plans

### STATE OF DELAWARE

#### **1) 3 Del. C. §§ 2200 et. al.; 2247, 2248; CDR 3-1200-1203, 7-7201 §9.5.5—9.5.5.2**

*The statutes and Constitution are current through the 2018 regular and special legislative sessions. The statutes are subject to changes by the Delaware Legislative Council.*

#### **1) 3 Del. C. §§ 2200 et. al.; 2247, 2248; CDR 3-1200-1203, 7-7201 §9.5.5—9.5.5.2**

##### **§ 2201 Declaration of purpose.**

The purposes of this chapter are:

- (1) To regulate those activities involving the generation and application of nutrients in order to help improve and maintain the quality of Delaware's ground and surface waters and to meet or exceed federally mandated water quality standards, in the interest of the overall public welfare;
- (2) To establish a certification program that encourages the implementation of best management practices in the generation, handling or land application of nutrients in Delaware;
- (3) To establish a nutrient management planning program; and
- (4) To formulate a systematic and economically viable nutrient management program that will both maintain agricultural profitability and improve water quality in Delaware.

##### **§ 2202 Definitions.**

For the purposes of this chapter:

- (1) "Agricultural commodity" means any agricultural product, including, but not limited to, plants, animals and plant and animal products grown, raised or produced within the State for use as food, feed, seed or any aesthetic, industrial or chemurgic purpose.
- (2) "Animal unit" shall be as defined by the United States Department of Agriculture.
- (3) "Applicant" means any person seeking a certificate from the Commission.
- (4) "Best management practices" means those practices that have been identified as such by the Commission.

(5) “CAFO NPDES Program” means a regulatory program to issue a National Pollution Discharge Elimination System (NPDES) permit to a Concentrated Animal Feeding Operation (CAFO) in this State, and to undertake related activities. The CAFO NPDES Program is established pursuant to, among other authorities, the Clean Water Act [33 U.S.C. § 1251 et seq.] and Memorandum of Understanding between the Delaware Department of Natural Resources and Environmental Control (DNREC) and the Environmental Protection Agency (EPA) dated May 4, 1983, as amended.

(6) “Certification” means the recognition by the DNMC that a person has met the qualification standards established by the DNMC and has been issued a written certificate authorizing such person to perform certain functions.

(7) “Commercial processor” means an individual, partnership, corporation, association or other business unit that controls, through contracts, vertical integration or other means, several stages of production and marketing of any agricultural commodity.

(8) “Commission” or “DNMC” means the Delaware Nutrient Management Commission.

(9) “Commissioner” means a member of the DNMC.

(10) “Critical area targets” means watersheds, subwatersheds or sectors where water quality conditions merit special attention, where resources should be directed and for which incentives should be provided.

(11) “Environmental coordinator” means an employee of the Department of Agriculture who acts on behalf of the Commission as a liaison between the Commission and persons against whom a complaint for a violation of this chapter or Commission regulation has been brought.

(12) “Nutrient management plan” or “plan” means a plan by a certified nutrient consultant to manage the amount, placement, timing and application of nutrients in order to reduce nutrient loss or runoff and to maintain the productivity of soil when growing agricultural commodities and turfgrass.

(13) “Nutrients” means nitrogen, nitrate, phosphorus, organic matter and any other elements necessary for or helpful to plant growth.

(14) “Person” means any individual, partnership, association, fiduciary, or corporation or any organized group of persons, whether incorporated or not.

(15) “Program administrator” or “NMPA” means the 1 exempt employee of the Department of Agriculture who is responsible for the operation of the State Nutrient Management Program.

(16) “Secretary” means the Secretary of the Delaware Department of Agriculture or his/her designee.

(17) “State nutrient management program” or “SNMP” means all the program elements developed by the Commission, including, but not limited to, establishing critical areas for

targeting programs, establishing best management practices to reduce nutrient losses, developing educational and certification programs, developing nutrient management plan requirements, developing incentive programs that encourage compliance, making recommendations for transportation of nutrients, and determining appropriate alternative uses.

**§ 2220 Delaware Nutrient Management Commission; general powers and duties.**

(a) The Delaware Nutrient Management Commission is hereby established. The Commission shall have the power to develop, review, approve and enforce regulations governing the certification of individuals engaged in the business of land application of nutrients and the development of nutrient management plans as set forth in this chapter. In addition, the Commission shall:

- (1) Consider the establishment of critical areas for targeting of other voluntary or regulatory programs;
- (2) Establish best management practices to reduce nutrient losses to the environment;
- (3) Develop educational and awareness programs designed to voluntarily curtail use of nutrients by persons not otherwise covered by this chapter;
- (4) Consider the development of a transportation and alternative use incentive program to move nutrients from areas with overabundance to areas needing nutrient sources;
- (5) Make such other recommendations to the Secretary that it deems important for the furtherance of the goals of this Chapter; and
- (6) Establish the elements and general direction of the State Nutrient Management Program.

(b) The Commission, in carrying out its duties under this chapter, shall consider comments from affected stakeholders and others interested in the activities of the Commission, including, but not limited to, the University of Delaware and other state and federal agencies, nonprofit groups, and others with an interest in nutrient management. In addition, the Commission shall consider prior work of the Governor's Agricultural Industry Advisory Committee on Nutrient Management.

(c) Notwithstanding the foregoing, the Commission shall not hold any person or persons certified pursuant to this chapter responsible for violations committed by another person.

[...]

**§ 2247. Nutrient management plans.**

(a) All animal feeding operations with greater than 8 animal units or any person who owns, leases or otherwise controls property in excess of 10 acres upon which nutrients are applied shall develop and implement a nutrient management plan in accordance with the schedule outlined in this section. All nutrient management plans shall include, but not be limited to:

- (1) Field maps showing reference points (such as buildings, stream, irrigation equipment, etc.), number of acres and soil types;
- (2) Soil and organic waste analyses;
- (3) Current and planned crop rotations;
- (4) Expected yields based on best 4 out of 7 year data or, in the absence thereof, soil productivity charts; and
- (5) Recommended rates, timing and methods of nutrient applications.

(b) Nutrient management plans shall specify the level of nutrient applications that are needed to attain expected crop yields as defined in paragraph (a)(4) of this section. Applications of phosphorus to high phosphorous soils cannot exceed a 3-year crop removal rate. Nitrogen applications cannot exceed the expected yield, as defined in paragraph (a)(4) of this section of the specific crop.

(c) All animal waste management plans, nutrient management plans and records of implementation shall be kept by the land owner or person responsible for the plans or records. Animal waste management plans, nutrient management plans and records of implementation shall not be considered as public records under the Freedom of Information Act and shall not be disclosed, except, however, that they shall be made available for inspection by the Delaware Department of Agriculture and the Commission. Records of implementation shall include:

- (1) Soil test results and recommended nutrient application rates;
- (2) Quantities, analyses and sources of nutrients applied;
- (3) Dates and methods of nutrient applications;
- (4) Crops planted, yields and crop residues removed; and
- (5) Certification statement signed by the operator to document the intention of nutrient management and/or animal waste management plan implementation

Notwithstanding the foregoing, animal waste management plans, nutrient management plans and records of implementation may be retained, disclosed and made public as provided for in § 2248 of this title.

(d) Nutrient management plans shall be updated a minimum of every 3 years or upon significant alterations in facility operations, or upon a 25% or greater increase in facility operations. Such plans shall be reported to the Commission no later than December 15 of the year in which it must be updated.

(e) If a person implementing a nutrient management plan intends to store manure, other than in an approved manure storage structure or facility, such outdoor storage shall:

- (1) Be reflected in the person's nutrient management plan;
- (2) Be at least 100 feet from any body of water or drainage ditch;
- (3) Be at least 100 feet from any public road;
- (4) Be at least 200 feet from any residence that is not located on the person's property; and
- (5) Be at least 6 feet high and in a conical shape.

(f) In situations where persons other than the land owner are responsible for nutrient applications, nutrient management plans as required in this section shall be the responsibility of the person actually managing the application of nutrients to that property.

(g) Upon completion and implementation of a nutrient management plan, the owner/operator/planner shall notify the Commission within 60 days of the completion of the plan.

(h) In the event of circumstances that are beyond the control of the person implementing a nutrient management plan pursuant to this section, such person shall notify the Department of any actions he or she intends to take as a result of those circumstances.

(i) In the case of animal feeding operations where no other nutrients are used for farming and the animal waste is not land-applied, the operator of the facility may substitute an animal waste management plan for a nutrient management plan. At a minimum, the animal waste management plan shall include:

- (1) Information concerning how the waste is stored prior to transport;
- (2) Records of where and to whom the animal waste was transported and the amount of such waste; and
- (3) The mortality disposal method.

(j) The State shall make nutrient consultants available through the conservation districts to provide free nutrient management plans assistance to anyone requesting such assistance. For those persons wishing to hire private nutrient consultants, the State, through the conservation districts, shall reimburse any person establishing a nutrient management plan or updating an established nutrient management plan at a rate and amount that shall be determined annually by the Commission and subject to annual appropriations.

(k) County, municipal and industrial facilities discharging solid or liquid waste and permitted by the Department of Natural Resources and Environmental Control under The Guidance and Regulations Governing the Land Treatment of Wastes shall be exempt from the provisions of this chapter. Provided, however that they provide the Commission with an annual report as required by their land treatment permit.

**§ 2248. Confined animal feeding operations subject to Clean Water Act § 402 requirements.**

(a) Section 301(a) of the Clean Water Act (CWA) [33 U.S.C. § 1311] establishes statutory requirements for the discharge of pollutants from point sources to waters of the United States. Under CWA § 502(14) and implementing regulations “concentrated animal feeding operations” are point sources subject to the National Pollutant Discharge Elimination System (NPDES) program. The Regulations Governing the Control of Water Pollution, § 9.5 Concentrated Animal Feeding Operation, CDR 7-7000-7201 § 9.5, Del. Reg. 482 (November 2010), as may be amended, are hereby ratified and approved. Said regulations, together with the State Technical Standards, are fundamental components of the CAFO NPDES Program. Nothing in this section shall be construed to require ratification or approval of any additions, deletions, revisions or amendments of any regulations enacted pursuant to this section at any time.

(b) The Secretaries of the Delaware Department of Agriculture (DDA) and the Department of Natural Resources and Environmental Control (DNREC) shall have authority to jointly promulgate and amend regulations for the CAFO NPDES Program, including but not limited to the authority to determine the extent to which any nutrient management plan (NMP), annual report, or other documents required to be submitted by a concentrated animal feeding operation permitted under the CAFO NPDES Program, shall be made public or not, and the authority to require any concentrated animal feeding operation to apply for and obtain an NPDES CAFO permit.

(c) Each person or concentrated animal feeding operation covered by this section or identified as requiring an NMP by DDA and DNREC shall develop and submit the requisite, signed NMP, on such terms and conditions as may be specified by DDA or DNREC. The NMP shall be developed in accordance with the provisions of § 2247 of this title, provided, however, that DNREC and DDA may prescribe additional or different requirements for an NMP submitted under the CAFO NPDES Program. As necessary, the NMP shall also include but not be limited to, the following additional site specific handling and storage considerations:

- (1) Diverting clean water from contacting animal waste or litter;
- (2) Preventing storage, collection and conveyance systems from leaking organic matter, nutrients and pathogens to ground or surface water;
- (3) Providing adequate storage to prevent polluted runoff;

- (4) Handling manure and litter to reduce nutrient losses;
- (5) Managing dead animals to protect ground and surface waters;
- (6) Proper chemical handling; and,
- (7) Tillage and crop residue management practices.

The NMP shall be amended pursuant to § 2247(d) of this title or whenever there is any significant change in the design, construction or operation which has a significant effect on the potential for the discharge of pollutants to state waters, or as may be otherwise required by regulation.

(d) The Memorandum of Agreement between DDA and DNREC dated December 16, 2010 (MOA), is hereby ratified and approved. DDA has authority to fulfill the terms of the MOA, to undertake all actions ancillary to the MOA, and otherwise to contribute to the CAFO NPDES Program.

(e) The Secretary shall notify a person in writing that an NPDES permit is required. Such notice shall include a brief statement of the reasons for the decision, an application form, a deadline for submission of the application and a statement regarding the effective date of coverage. A person's obligation to independently seek and secure an NPDES permit is not conditioned upon or qualified by the Secretary's duty to notify a person that an NPDES permit is required.

[...]

## **CHAPTER 1203. MANDATORY NUTRIENT MANAGEMENT PLAN REPORTING IMPLEMENTATION**

### **Section 1.0 Authority.**

**1.1** These regulations are promulgated pursuant to the authority provided by 3 Del.C., Ch. 22, §§ 2220 and 2221.

### **Section 2.0 Purpose.**

**2.1** The purpose of these regulations is to establish requirements for implementation of mandatory nutrient management plan reporting pursuant to Section 5, 72 Del. Laws, c. 60.

### **Section 3.0 Registration Requirement for Persons Selected for Mandatory Nutrient Management Plan Reporting Pursuant to Section 5, 72 Del. Laws, c. 60.**



**3.1** Persons notified that they have been selected by the Commission to be phased into the nutrient management planning program and mandatory nutrient management plan reporting (pursuant to Section 5, 72 Del. Laws, c. 60) shall register with the Commission within thirty (30) days of receiving such notice. Registration shall be made in writing, by completing and submitting, to the Nutrient Management Program Administrator, a registration form approved by the Commission.

**3.2** Failure to register within the required period shall subject the person(s) failing to respond to the penalty provisions of 3 Del.C., Ch. 22.

**3.3** If the Commission sends such notification by registered mail, the return receipt or other official proof of delivery shall constitute presumptive evidence that the notice mailed was received by the person(s) or the latter's agent; and the notation of refusal shall constitute presumptive evidence that the refusal was by the person(s) or the latter's agent.

**Section 4.0** Requirement for Nutrient Management Plan and/or Animal Waste Management Plan in Accordance with Standards Outlined in 3 Del.C. § 2290 et. al. by January 1, 2007.

**4.1** All animal feeding operations with greater than 8 animal units or any person who owns, leases or otherwise controls property in excess of 10 acres upon which nutrients are applied shall develop and implement a nutrient management plan and/or an animal waste management plan in accordance with the standards outlined in 3 Del.C. § 2200 et al. by January 1, 2007.

**4.2** Any animal feeding operation or person requiring a nutrient management plan and/or an animal waste management plan after January 1, 2007, shall have 180 days from the date the property owner or manager assumes control of the animal feeding operation with greater than 8 animal units or owns, leases or otherwise controls property in excess of 10 acres upon which nutrients are applied to develop and implement a nutrient management plan and/or an animal waste management plan.

**4.3** Non-compliance with the nutrient management statute and regulations may result in an enforcement action and the imposition of fines and penalties as set forth in the Nutrient Management Law (3 Del.C. § 2280, et. al).

[...]

## **§ 7201 REGUALTION GOVERNING THE CONTROL WATER POLLUTION**

### **9.5.5 Nutrient Management Plans or Animal Waste Management Plans**

9.5.5.1 For purposes of compliance with these regulations a nutrient management plan or animal waste management plan shall be written by a certified nutrient consultant in accordance with State Technical Standards and shall contain the following applicable contents:

9.5.5.1.1 Plan Identification:

9.5.5.1.1.1 Owner and operator name, owner and operator mailing address, county road number or name, telephone number and watershed designation of operation.

9.5.5.1.1.2 The trade name of the CAFO, type of business (corporation, sole proprietorship, partnership, etc), mailing address, contact information for, but not limited to the owner and operator, and emergency address or location description to include the closest road name intersection of the CAFO.

9.5.5.1.1.3 Nutrient consultant's name and company:

9.5.5.1.1.3.1 Address and telephone number.

9.5.5.1.1.3.2 Nutrient consultant certification number.

9.5.5.1.1.3.3 Date of plan and duration of animal waste or nutrient management plan.

9.5.5.1.1.4 Total acres owned, licensed, or leased by the CAFO owner and operator represented in the nutrient management plans or animal waste management plan and a brief description of agricultural commodities produced within the CAFO.

9.5.5.1.1.5 Certification statement signed by the owner or operator stating the owner and operator shall implement the nutrient management or animal waste management plan.

9.5.5.1.2 Field maps or aerial photographs that include the following:

9.5.5.1.2.1 Individual field identification and boundaries for all owned, licensed or leased fields under control of the CAFO owner or operator.

9.5.5.1.2.2 A copy of soil survey map showing all soil types on each field or the soil texture identification of all pertinent soils.

9.5.5.1.2.3 The location of all surface waters including drainage ditches, streams, ponds, etc.

9.5.5.1.2.4 Irrigation systems where applicable.

9.5.5.1.2.5 Latitude and longitude of the production area will be maintained by the Department in the NPDES CAFO permit case file for each CAFO NOI received.

9.5.5.1.3 Crop and Nutrient Information:

9.5.5.1.3.1 The total number and type of animals, annual quantity estimate of manure and litter generation and storage methods.

9.5.5.1.3.2 Description and method of temporary outside locations of manure.

9.5.5.1.3.3 Total acres owned, licensed or leased by the CAFO owner or operator subject to the animal waste management plan or nutrient management plan and summary of needed nutrients.

9.5.5.1.3.4 Realistic yield goal in accordance with State Technical Standards.

9.5.5.1.3.5 Soil test results using protocols established in the State Technical Standards.

9.5.5.1.3.6 Current and planned crop rotation.

9.5.5.1.3.7 Determine the rate of application of nitrogen and phosphorus using the narrative rate approach or the linear rate approach in accordance with State Technical Standards.

9.5.5.1.3.7.1 Determine nitrogen application rates for each field based on realistic yield goal of crop(s) to be grown and in accordance with State Technical Standards.

9.5.5.1.3.7.2 Determine the phosphorus application rates for each field in accordance with State Technical Standards.

9.5.5.1.3.7.3 The linear rate approach includes maximum application rates from manure, litter and process wastewater for each year of NPDES CAFO permit coverage, for each crop identified in the nutrient management plan, in chemical forms determined to be acceptable to the Secretary, in pound per acre, per year, for each field to be used for land application, and certain factors necessary to determine such rates. At a minimum, these factors must include:

9.5.5.1.3.7.3.1 The outcome of a field-specific assessment of the potential for nitrogen and phosphorus transport from each field;

9.5.5.1.3.7.3.2 The crops to be planted in each field or any other uses of a field such as pasture or fallow fields;

9.5.5.1.3.7.3.3 The realistic yield goal for each crop or use identified for each field;

9.5.5.1.3.7.3.4 The nitrogen and phosphorus recommendations from sources specified by the Secretary for each crop or use identified for each field;

9.5.5.1.3.7.3.5 Credits for all nitrogen in the field that will be plant available;

9.5.5.1.3.7.3.6 Consideration of a multi-year phosphorus application; and

9.5.5.1.3.7.3.7 Accounting for all other additions of plant available nitrogen and phosphorus to the field;

9.5.5.1.3.7.3.8 For land applications include:

9.5.5.1.3.7.3.8.1 The form and source of manure, litter, process wastewater to be land applied;

9.5.5.1.3.7.3.8.2 The timing and method of land application;

9.5.5.1.3.7.3.8.3 The methodology by which the nutrient management plan accounts for the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be land applied.

9.5.5.1.3.7.3.9 Large CAFOs that use this approach must calculate the maximum amount of manure, litter, and process wastewater to be land applied at least once each year using the results of the most recent representative manure, litter, or process wastewater tests for nitrogen and phosphorus taken within 12 months of the date of land application.

9.5.5.1.3.7.4 The narrative rate approach must include the maximum amounts of nitrogen and phosphorus derived from all sources of nutrients, for each crop identified in the nutrient management plan, in chemical forms determined to be acceptable by the Secretary, in pounds per acre, for each field, and certain factors necessary to determine such amounts.

9.5.5.1.3.7.4.1 At a minimum, the factors must include:

9.5.5.1.3.7.4.1.1 The outcome of a field-specific assessment of the potential for nitrogen and phosphorus transport from each field;

9.5.5.1.3.7.4.1.2 The crops to be planted in each field or any other uses such as pasture or fallow fields (including alternative crops);

9.5.5.1.3.7.4.1.3 The realistic yield goal for each crop or use identified for each field; and

9.5.5.1.3.7.4.1.4 The nitrogen and phosphorus recommendations from sources specified by the Secretary for each crop or use identified for each field.

9.5.5.1.3.7.4.2 In addition, the terms of the nutrient management plan must include the methodology by which the nutrient management plan accounts for the following factors when calculating the amounts of manure, litter, and process wastewater to be land applied:

9.5.5.1.3.7.4.2.1 Results of soil tests conducted in accordance with protocols identified in the nutrient management plan and State Technical Standards;

9.5.5.1.3.7.4.2.2 Credits for all nitrogen in the field that will be plant available;

9.5.5.1.3.7.4.2.3 The amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied;

9.5.5.1.3.7.4.2.4 Consideration of multi-year phosphorus application;

9.5.5.1.3.7.4.2.5 Accounting for all other additions of plant available nitrogen and phosphorus to the field;

9.5.5.1.3.7.4.2.6 The form and source of manure, litter, and process wastewater;

9.5.5.1.3.7.4.2.7 The timing and method of land application; and

9.5.5.1.3.7.4.2.8 Volatilization of nitrogen and mineralization of organic nitrogen.

9.5.5.1.3.7.4.3 The terms of the nutrient management plan shall include alternative crops identified in the CAFO's nutrient management plan that are not in the planned crop rotation. Where a CAFO includes alternative crops in its nutrient management plan, the crops must be listed by field, in addition to the crops identified in the planned crop rotation for that field, and the nutrient management plan must include realistic crop yield goals and the nitrogen and phosphorus recommendations from sources specified by the Secretary for each crop. Maximum amounts of nitrogen and phosphorus from all sources of nutrients and the amounts of manure, litter, and process wastewater to be applied must be determined in accordance with the methodology described in State Technical Standards.

9.5.5.1.3.7.4.4 For CAFOs using the narrative rate approach, the following projections must be included in the nutrient management plan submitted to the Secretary, but are not terms of the nutrient management plan:

9.5.5.1.3.7.4.4.1 The CAFO's planned crop rotations for each field for the period of permit coverage;

9.5.5.1.3.7.4.4.2 The projected amount of manure, litter, or process wastewater to be applied;

9.5.5.1.3.7.4.4.3 Projected credits for all nitrogen in the field that will be plant available;

9.5.5.1.3.7.4.4.4 Consideration of multi-year phosphorus application;

9.5.5.1.3.7.4.4.5 Accounting for all other additions of plant available nitrogen and phosphorus to the field; and

9.5.5.1.3.7.4.4.6 The predicted form, source, and method of application of manure, litter, and process wastewater for each crop.

9.5.5.1.3.7.4.4.7 Timing of application for each field, insofar as it concerns the calculation of rates of application, is not a term of the nutrient management plan.

9.5.5.1.3.7.4.5 CAFOs that use the narrative rate approach must calculate maximum amounts of manure, litter, and process wastewater to be land applied at least once each year using the methodology required in State Technical Standards before land applying manure, litter, and process wastewater and must rely on the following data:

9.5.5.1.3.7.4.5.1 A field-specific determination of soil levels of nitrogen and phosphorus, including, for nitrogen, a concurrent determination of nitrogen that will be plant available consistent with the methodology required by State Technical Standards, and for phosphorus, the results of the most recent soil test conducted in accordance with soil testing requirements in accordance with State Technical Standards; and

9.5.5.1.3.7.4.5.2 The results of most recent representative manure, litter, and process wastewater tests for nitrogen and phosphorus taken within 12 months of the date of land application, in order to determine the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied.

9.5.5.1.3.8 Manure, litter and process wastewater analysis using protocols established in State Technical Standards

9.5.5.1.3.9 Estimate residual nitrogen (organic nutrients, fertilizer, or legume crops from prior year) in absence of a Pre-sidedress Soil Nitrate Test (PSNT) in accordance with State Technical Standards.

9.5.5.1.3.10 Describe the nitrogen and phosphorus source(s) selected, rates and approximate timing of application(s).

9.5.5.1.3.11 Determine the appropriate application of manure, litter and process wastewater within the application area in accordance with State Technical Standards.

9.5.5.1.4 Description of minimum best management practices (BMPs) in place and to be implemented in the production area and in the land application area in accordance with State Technical Standards to include, but not limited to:

9.5.5.1.4.1 Provide an overall manure balance budget that clearly identifies available manure, intended manure use, manure storage capacity, and excess manure.

9.5.5.1.4.1.1 This budget shall identify the intended use to include, but not limited to land application, exportation, or other described uses in accordance with State Technical Standards.

9.5.5.1.4.1.2 The CAFO owner or operator shall account for excess manure in the annual Nutrient Management Report.

9.5.5.1.4.2 Provide a description of manure storage capacity and general schedule or timeframe when manure is removed or transported to a temporary field staging, land application area, exportation or other uses to include but not be limited to:

9.5.5.1.4.2.1 Management practices to prevent manure storage, collection, and conveyance systems from leaking pollutants to Waters of the State.

9.5.5.1.4.2.1.1 For liquid storage: storage shall be managed to prevent a discharge of pollutants and must include a calendar plan for liquid and sediment removal, with a freeboard action level of not less than one foot, with a depth marker.

9.5.5.1.4.2.1.2 For solid storage: permanent and temporary storage shall be managed to prevent a discharge of pollutants and be consistent with State Technical Standards.

9.5.5.1.4.2.2 Emergency actions for spills and catastrophic events for liquid storage systems to include the volume of water generated and collected by a 25-year, 24-hour rainfall event.

9.5.5.1.4.3 Describe adequate storage methods for manure, litter and process wastewater, and proper operation and maintenance of the storage facilities in accordance with State Technical Standards.

9.5.5.1.4.4 Provide a description and action plan to divert or segregate all clean water as appropriate from the production area and for collecting all water coming in contact with the production area in accordance with State Technical Standards to include but not limited to the following categories:

9.5.5.1.4.4.1 Approved methods in accordance with State Technical Standards to prevent direct contact between animals and Waters of the State; and

9.5.5.1.4.4.2 Approved methods in accordance with State Technical Standards to prevent runoff from coming into contact with manure, litter, or process wastewater.

9.5.5.1.4.5 Provide a detailed animal mortality plan to include but not be limited to the following contents:

9.5.5.1.4.5.1 Provide a statement acknowledging that burial of dead animals is prohibited. The State Veterinarian may approve this practice under emergency circumstances such as serious bio-security threats.

9.5.5.1.4.5.2 Provide a description of the methods and procedures for daily handling and disposal of dead animals in a manner to prevent contamination of Waters of the State.

Disposal of mortalities is strictly prohibited in liquid manure, storm water, or process wastewater storage or treatment areas.

9.5.5.1.4.5.3 Methods and procedures for handling catastrophic mortalities in accordance with State Technical Standards.

9.5.5.1.4.6 Describe conservation practices to control nutrient loss sufficient to minimize the discharge of pollutants to Waters of the State to be implemented on the CAFO in accordance with State Technical Standards.

9.5.5.1.4.6.1 Identify manure and processed wastewater application setbacks to be implemented on the CAFO in accordance with State Technical Standards. The direct application of manure or processed wastewater to Waters of the State is prohibited. The following three setback standards are provided as three options:

9.5.5.1.4.6.1.1 One-hundred (100) foot application setback measured from the top of the bank of the water of the state to be protected, (Unless the CAFO exercises one of the compliance alternatives provided for in paragraphs 5.1.4.6.1.2, or 5.1.4.6.1.3, of this section, manure, litter and process wastewater may not be applied closer than 100 feet to any down-gradient surface waters, open tile intakes structures, sinkholes, agricultural well heads or other conduits to surface water) and/or

9.5.5.1.4.6.1.2 Thirty-five (35) foot vegetated buffer measured from the top of the bank of the water of the state to be protected, where applications of manure, litter, and process wastewater are prohibited, and/or

9.5.5.1.4.6.1.3 Alternative compliance practices as follows:

9.5.5.1.4.6.1.3.1 Minimum ten (10) foot vegetated buffer measured from the top of the bank of the water of the state to be protected, and plant a winter cover crop in accordance with State Technical Standards following the crop receiving manure, litter or process wastewater for fields with high phosphorus soils and; or

9.5.5.1.4.6.1.3.2 Minimum ten (10) foot application setback measured from the top of the bank of the water of the state to be protected, and plant a winter cover crop in accordance with State Technical Standards following crops receiving manure, litter or process wastewater in areas without high phosphorus soils.

9.5.5.1.4.6.1.3.3 Any additional approved alternative compliance practices identified in the State Technical Standards.

9.5.5.1.4.7 Chemicals and other contaminants handled on-site shall not be disposed of in any manure, litter, process wastewater, or storm water storage or treatment system.

9.5.5.2 A CAFO nutrient management plan or animal waste management plan shall be provided and implemented for the term of the CAFO NPDES Permit upon submittal of



the NOI. Upon expiration of the NPDES CAFO permit, or upon substantial changes to the CAFO, as defined in §9.5.8.4 of these regulations, or when the CAFO owner or operator makes changes to the nutrient management plan or animal waste management plan, a new plan must be provided. Such plans shall be reported to the Department no later than December 15 of the year in which they are required to be updated. Where the owner or operator makes changes to the nutrient management plan or animal waste management plan, they shall also identify the changes, as required by §9.5.8.4.1 of these regulations.